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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/001,511

10/31/2001

Sanford J. Morganstein

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EXAMINER

HESS, DANIEL A

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/001,511

Applicant(s)

MORGANSTEIN, SANFORD J.

Examiner

Daniel A. Hess

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 7-29, 33-46, 48, 49, 53-57, 59, 62-67 and 70-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7-29, 33-46, 48, 49, 53-57, 59, 62-67, and 70-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/16/06

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

This action is responsive to the 4/25/2006 amendment and arguments by the Applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 5, 7-11, 14-16, 18-29, 33-37, 40-46, 48, 49, 53, 56, 57, 59, 62, 65-67, and 70, 71 and 74-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sehr (US 5,875,432) in view of the Caltech/MIT voting project (hereinafter VTP).

Re claim 1:

[Under at least one interpretation, Sehr could be considered a 102b by itself for claim 1 and other independent claims, because a record of voting is written onto the voter's

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ID smart card in Sehr. But lest there be any question whether this is a ‘tangible ballot’ the rejection is being made as a 103].

For the sake of clarity, individual limitations of claim 1 are listed below in italics, followed in each case by a discussion of the prior art teachings that pertain to the recited limitations.

An advanced voting system, comprising:

an election key generator operable to generate an a tangible election key storing information related to a voter and storing a digital signature used to ensure that the election key is valid and authentic;

See column 2, lines 18+ of Sehr: “The voting cards, which will be issued to the individual voters as personal identification devices (i.e. as a voting pass/ballot), are represented by "smart cards" that have a shape similar to plastic bankcards, but with silicon chips and software embedded into the card package. The smart voting card will identify the rightful cardholder and guarantee the voting eligibility of that particular individual when arriving for voting purposes.”

The smart card id is the claimed tangible election key.

See column 5, lines 5+:

“The biometrics box 12 allows the PC to capture the biometrics characteristics, such a fingerprints, voice, **digital signature** or retina of a particular cardholder, so that the system can **compare this biometrics data** with the one stored in the system's databases or **voting cards.**”

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From the above, it can be inferred that in at least one embodiment, the card stores a digitized signature. Note that this meets the requirement of “proving authenticity” and “proving authorship” as per the definition provided by the inventor in the 9/13/2005 affidavit, on page 2, in the 4th paragraph of the declaration.

one or more computing devices operable to:

interface with the election key;

retrieve the digital signature from the election key to ensure that the election key is valid and authentic;

These functions are performed by the smart card reader, and are discussed in detail in column 5, lines 1+, for example, of Sehr.

present ballot questions to the voter if an appropriate digital signature is retrieved from the election key; and

See figures 6a and 6b of Sehr. As the flow charts show, in Sehr, if the smart card is validated, questions will then be presented to the voter.

receive interactive voter selections from the voter; and

See column 2, lines 14+: “computerized means of performing the collecting”. Other areas of Sehr support this automated data collection.

a ballot generator operable to generate tangible ballots containing the voter selections.

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See column 8, lines 55+: “As shown by block 308.1, an appropriate audit trail will be stored within the tabulation center's database as well as loaded into the voting card.”

Therefore, a tangible record is made, on the voter's tangible card, of votes cast.

See column 4, lines 25+: “An example of such an audit trail is as follows: Nov. 11, 1994--J. C. Smith/State Senate--YES=7,543,198/NO=1,273,542/Abstain=125,742.”

In case Sehr's audit trail is not considered a ‘tangible ballot’ note that much of the VTP document (see pages 56-67) is dedicated to the importance of generating an keeping a tangible audit trail.

In view of VTP, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known tangible audit trail because this makes ballot fraud exceedingly difficult.

Re claims 2/3: See column 5, lines 5+:

“The biometrics box 12 allows the PC to capture the biometrics characteristics, such a fingerprints, voice, **digital signature** or retina of a particular cardholder, so that the system can **compare this biometrics data** with the one stored in the **system's databases** or voting cards.”

Re claim 5:

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See column 6, lines 24-25: Based on the user's identity, the system will verify the appropriate eligibility.

Thus a user will only be able to face questions that are appropriate for them.

Re claim 7: In Sehr, a smart card is used as the key, but it is well-known in the art that other data bearing means could be used.

As VTP teaches (page 62, 2nd column) paper frogs can contain a 2D barcode.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the old and well-known bar code storage means for the chip data storage means on the card of Sehr because bar codes are cheaper to manufacture than chip cards.

Re claim 8: This is the 'audit trail' discussed extensively in the specification and claims of Sehr.

Re claim 9: See column 6, lines 38 of Sehr. The voting station is part of the audit trail.

Re claim 10, 15, 16: VTP recommends (left column of page 61, last paragraph) signing a vote with the vote casting equipment. This would commonly identify the precinct because the vote casting equipment is located in a particular precinct on a particular day.

In view of VTP, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known signing by the equipment because this further ensures that each vote cast is authentic.

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Re claim 11: Touch screens have long been a common way of interfacing with a computer to make choices. Witness ATM machines. A motive is ease-of-use.

Re claim 14: See column 5, lines 5+ of Sehr.

Re claim 18: Ensuring proper filling out of the ballot is standard in electronic voting. VTP suggests this as well: see the first paragraph of page 61, “the voter is given generous feedback at all stages.” Later, in the fourth paragraph, it states, “the voter is asked to confirm that these are indeed his or her choices.”

The motive is to use software to ensure that the ballot is properly filled out according to the desires of the voter.

Re claim 19: It is understood in the art that a PDA is a scaled down version of a PC for most operations that aren’t computationally or graphically out of range of a PDA.

Re claim 20: Every voting system must have a tallying system, whether explicit or not, otherwise the voting purpose is not served. As for auditing using the available audit trail, what purpose does an audit trail serve if not to enable auditing.

Re claim 21: The claimed comparing of paper counts with electronic counts is standard and is indeed the primary use of having a tangible ballot trail, which VTP clearly advocates.

Re claim 22: If votes are collected automatically by computer, then certainly they would be tallied this way as well. VTP teaches this as well.

Re claim 23: See claims 21 and 22, above.

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Re claim 24, 59, 67: In VTP, tangible ballots (aka 'FROGS') are part of the audit trail. Clearly, for electronic versions, the audit trail would have to be read by machine, since it is not human-readable.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known machines for reading the audit trail because the audit trail may include smart cards (as in both Sehr and VTP) and therefore would not be human-readable. In any event, machines tend to be less error-prone than humans.

Re claim 25: In Sehr, see column 4, lines 25+: "An example of such an audit trail is as follows: Nov. 11, 1994--J. C. Smith/State Senate--YES=7,543,198/NO=1,273,542/Abstain=125,742."

Re claim 26: If capability is present (as Sehr has) for putting in a signature then it follows that there is also capability for writing in a ballot.

A motive is to comply with local election rules allowing write-ins.

Re claims 27, 48, 49: See discussion re claim 1, above.

Re claim 28: See discussion re claim 2, above.

Re claim 29: See discussion re claim 3, above.

Re claim 33: See discussion re claim 7, above.

Re claim 34: See discussion re claim 8, above.

Re claim 35, 36: See discussion re claim 10, above.

Re claim 37, 53, 62 and 71: See discussion re claim 11, above.

Re claim 40: See discussion re claim 14, above.

Re claims 41, 43 and 56: See discussion re claim 18, above.

Re claims 42, 44 and 45: See discussion re claims 20-24, above.

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Re claims 46 and 57: See discussion re claim 26, above.

Re claims 65 and 74: As VTP teaches (page 62, 2nd column) paper ballots for an audit trail (aka 'FROG's) can contain a 2D barcode.

In view of VTP's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known machine readable barcode means as taught by VTP on audit trail ballots because otherwise tallying of paper ballots is laborious.

Re claim 66: See discussion re claim 25, above.

Re claim 70: Recounting ballots is a process that is as old as elections itself. When both an electronic and a paper audit trail are present, as VTP has suggested, then one would clearly use both for greatest validation.

Re claims 75-78: VTP discusses the use of a paper 'frogs' (i.e. audit trail) which includes human readable/printed material (page 62).

In view of VTP's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known human readable portions of an electronic ballot in order to facilitate human auditing.

Claims 12, 13, 38, 39, 54, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sehr as modified by VTP as applied to claim 1 above, and further in view of McClure et al. (US 6,250,548). The teachings of Sehr as modified by VTP have been discussed above.

The use of instructions, in text on the screen is implied, the minimal instructions being which instructions will cast a vote for which candidate. Any screen that shows such information can be called a help screen.

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Sehr fails to either language selection or text-to-speech capability.

McClure shows (see excerpt, 2nd page) language selection in electronic voting. McClure further shows (abstract, line 25) text-to-speech assistance of voters.

In view of McClure's teachings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known language selection or text-to-speech assistance as taught by McClure in the help/information text or screens of Sehr because this allows more universal access, toward the democratic goal of maximizing voter participation.

Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sehr in view of Challenger (of record in the instant case).

Re claim 17: In Challenger a voter id (column 8, line 28) is present in association with a ballot (i.e. as opposed to voter's name etc.).

In view of Challenger, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known association of a voter ID with a ballot in order to perform detailed auditing in cases such as where bogus voting is suspected.

Claims 63, 64, 72 and 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sehr as modified by VTP and McClure, and further in view of Willard (US 5,821,508). Sehr as modified by VTP and McClure have been discussed above.

Re claims 63 and 72: Sehr as modified by VTP and McClure fails to show determining the intent of the voter via time-proximity.

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Willard teaches (abstract) “a button on a hand-held device” in conjunction with audio selections, which suggests a time-proximity component is needed, since there is only one source of input.

In view of Willard, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known time-proximity-based voting with a single button because a blind person might have trouble with many buttons.

Re claim 64 and 73: Sehr shows (column 4, lines 35-40) the option of using the mouse as a backup system, in addition to a touch screen.

Sehr as modified by VTP and McClure fails to show the reviewing option.

Willard teaches (column 9, lines 7-30) that a user receives auditory reviewing instructions.

In view of Willard’s teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known auditory reviewing instructions as taught by Willard in the teachings of Sehr as modified by VTP and McClure because this may help prevent a blind person from making voting errors.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Vadura et al. (US 2003/0178484) has all features of the independent claims except digital signing.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

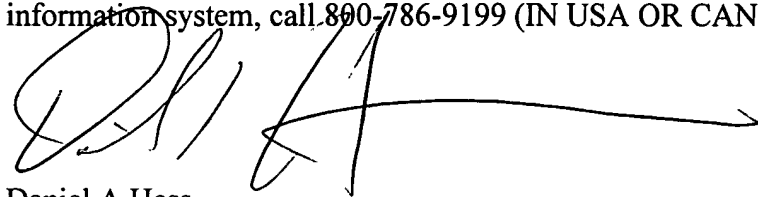
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Hess whose telephone number is (571) 272-2392. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel A Hess
Examiner
Art Unit 2876
8/4/06



AHSHIK KIM
PRIMARY EXAMINER